

Original Articles

- 1 **Sensibility of the Breast After Reduction Mammoplasty**
Sensibility was tested on nine points of the breast using the pressure specified sensory device in 25 patients before and six months after reduction mammoplasty. All patients had decreased sensation in all points postoperatively.
Marcus Castro Ferreira, MD
Márcio Paulino Costa, MD
Marcelo Sacramento Cunha, MD
et al
- 6 **Invited Discussion: Sensibility of the Breast Following Reduction Mammoplasty**
A. Lee Dellon, MD
- 10 **Abdominoplasty Repair for Abdominal Wall Hernias**
Seventy-six patients underwent 82 herniorrhaphies using an abdominoplasty approach with (1) fascial closure and plication, (2) fascial closure and vicryl mesh reinforcement, or (3) simple mesh placement. Complications included eight recurrences, one enterocutaneous fistula, one flap necrosis, and one late mesh extrusion.
J. Douglas Robertson, MD
Jorge I. de la Torre, MD, FACS
Paul M. Gardner, MD, FACS
et al
- 17 **Distal Trapezius Musculocutaneous Flap for Upper Thoracic Back Wounds Associated With Spinal Instrumentation and Radiation**
Five irradiated upper spinal wounds with exposed hardware were successfully reconstructed with distal trapezius musculocutaneous flaps. All healed satisfactorily despite three seromas.
Jin K. Chun, MD
Matthew J. Lynch, MD
George A. Poultides, MD
- 23 **The Thoracodorsal Artery Perforator Flap: Anatomic Basis and Clinical Application**
Dissection of 20 fresh cadavers disclosed a constant bifurcation of the thoracodorsal artery into a horizontal and lateral branch on the deep surface of the latissimus dorsi muscle. An average of 1.8 musculocutaneous perforators of the lateral branch and 1.4 of the horizontal branch had diameters greater than 0.5 mm.
Christoph Heitmann, MD
Aldo Guerra, MD
Stephan W. Metzinger, MD
et al
- 30 **New Anterolateral Thigh Perforator Flap With a Short Pedicle for Reconstruction of Defects in the Upper Extremities**
Three upper extremity defects were reconstructed with a free anterolateral thigh flap based on a perforator of the descending branch of the lateral circumflex femoral system. The flap does not require deep dissection, is rapidly elevated, provides minimal donor site morbidity, preserves the main trunk of the lateral circumflex femoral, may be primarily defatted, and leaves a concealed donor scar.
Isao Koshima, MD
Yuzaburo Nanba, MD
Tetsuya Tsutsui, MD
et al
- 37 **Soft-Tissue Reconstruction Using a Free Anterolateral Thigh Flap: Experience With 28 Patients**
Twenty-eight free anterolateral thigh flaps were transferred on a single perforator for head/neck and extremity reconstruction with only one partial failure. Thin flaps were used in ten cases and sensate flaps in four.
Serkan Yildirim, MD
Gülden Avci, MD
Tayfun Aköz, MD

- 45 Treatment of Painful Neuroma by Resection and Nerve Stump Transplantation Into a Vein**

Twenty-four painful neuromas were resected and transposed into adjacent veins. After an average 26-month follow-up, 22 were permanently improved and 12 were pain-free.

Horst Koch, MD
Franz Haas, MD
Martin Hubmer, MD
et al
- 51 V-Y Advancement Island Flap Based on the Perforator of the Anterior Interosseous Artery**

Two sizable dorsal wrist defects were successfully reconstructed with V-Y advancement flaps based on the dorsal perforator of the anterior interosseous artery.

Selçuk Akın, MD
- 57 Reconstruction of Fingertip and Stump Using a Composite Graft From the Hypothenar Region**

Fifteen finger stumps at the zone 1 level were successfully resurfaced using hypothenar composite grafts with primary donor site closure. The grafts provided protective padding, maximal length, and average 5.7-mm two-point discrimination.

Joon Pio Hong, MD
Sung-Jun Lee, MD
Hoon-Bum Lee, MD, PhD
et al
- 63 Vascular Anatomy of the Metacarpal Bones and the Interosseous Muscles**

A dissection study of 18 cadaver hands disclosed that the dorsal metacarpal arteries coursed along the ulnar aspect of the metacarpals, supplying the periosteum through the interosseous muscular branches. The anatomy suggests the feasibility of a split metacarpal myoosseous flap for carpal bone reconstruction.

Ahmet Çağrı Uysal, MD
Murat Şahin Alagöz, MD
Eray Tüccar, MD, PhD
et al
- 69 Superficial Femoral Lymph Node Dissection After Positive Sentinel Lymphadenectomy for Early-Stage Melanoma of the Lower Extremity**

*Sixteen consecutive patients with clinical Stage I or II melanoma of the lower extremity underwent superficial femoral lymph node dissection (SFLND) after positive sentinel node biopsy and wide local resection. Only one patient with a 7.48-mm thick primary was found to have an **additional** positive node on SFLND, and none developed subsequent regional disease.*

Lee L.Q. Pu, MD, PhD
C. Wayne Cruse, MD
Karen E. Wells, MD
et al
- 77 Regeneration of the Mandibular Head From Grafted Periosteum**

In a rabbit model, tibial periosteum was grafted onto the cut surface of the mandible after removal of the mandibular head. Cell proliferation, endochondral ossification, and reformation of the mandibular head proceeded over 45 days, whereas no regeneration was seen without a periosteal graft.

Takaaki Ueno, DDS, PhD
Toshimasa Kagawa, DDS, PhD
Jyoji Fukunaga, DDS, PhD
et al

- 84 **Late Remote Ischemic Preconditioning in Rat Muscle and Adipocutaneous Flap Models** Marcus V. Kuntscher, MD
Thomas Kastell
Holger Engel
et al
- In rat cremaster and epigastric adipo-cutaneous flap models, a 10-minute ischemic period of the contralateral hindlimb 24 hours before a flap challenge of two to three hours of ischemia resulted in higher red cell velocity and decreased numbers of "stickers" in the muscle flaps. However, there was no difference in adipo-cutaneous flap surviving area.*
- Case Reports**
- 91 **Reconstruction of an Extensive Thigh Defect With the Paraumbilical TRAM Flap** Alex Senchenkov, MD
Neil R. Thomford, MD
Frank E. Barone, MD
- 97 **Abdominal Wall Reconstruction With the Free Tensor Fascia Lata Musculofasciocutaneous Flap Using Intraperitoneal Gastroepiploic Recipient Vessels** Pierre M. Chevray, MD, PhD
Navin K. Singh, MD
- 103 **Temporal Dermoids: Three Cases and a Modified Treatment Algorithm** Martin Lacey, MD, FRCS(C)
Andrew J.L. Gear, MD
Adrian Lee, MD, FRCS(C)
- 110 **Invited Discussion: Full-Thickness Abdominal Wall Reconstruction in the Rabbit Model** Joseph J. Disa, MD, FACS
- Editorial**
- 112 **Green Mountain Surgeons** William D. Morain, MD
- 113 **Announcements**

Number 2/August 2003

Original Articles

- 115 **Sternal Wound Debridement and Muscle Flap Reconstruction: Functional Implications** David T. Netscher, MD
Firas Eladounikdachi, MD
Piper M. McHugh, OTR
et al
- A comparison study of post-sternotomy patients disclosed that those requiring debridement and muscle flaps had more pain and functional impairment than those with uncomplicated postoperative courses. Physical morbidity and strength impairment were found to be related more to loss of sternal stability than to muscle sacrifice.*
- 123 **Invited Discussion: Sternal Wound Debridement and Muscle Flap Reconstruction** Maurice Y. Nahabedian, MD

- 126 Reconstruction After Extirpation of Sacral Malignancies**
Nine patients undergoing oncologic sacrectomy were successfully reconstructed with gluteus maximus musculocutaneous flaps or skin flaps, with or without omental transfer and vicryl mesh. Complications included three dehiscences, four seromas, and two tumor recurrences.
 Jose Diaz, MD
 W. Scott McDonald, MD
 Milton Armstrong, MD
 et al
- 130 Regional Differences in Ultrasonic Assessment of Subcutaneous Fat Thickness in the Abdomen: Effects on the TRAM Flap**
Fifty TRAM-flap patients underwent preoperative abdominal fat thickness measurements with ultrasound in 12 locations. There was no correlation between fat thickness and rate of flap complications.
 Kenji Yano, MD
 Ko Hosokawa, MD
 Kunihiro Nakai, MD
 et al
- 136 Initial Experience with Personal Digital Assistant-Based Reflectance Photoplethysmograph for Free Tissue Transfer Monitoring**
In a series of 30 free tissue transfers monitored with reflectance photoplethysmography, the single ischemic event of the series was immediately detected. The monitor was able to correctly predict flap survival despite contrary duplex ultrasound data that suggested absent perfusion.
 Brendan C. Stack, Jr, MD
 Neal D. Futran, MD, DMD
 Billy Zang, BS, RVT
 et al
- 141 Tendon Function After Replantation: Prognostic Factors and Strategies to Enhance Total Active Motion**
A retrospective review of 103 digital replantations in 48 patients disclosed superior tendon function in Zone 1 and 5 injuries, non-avulsive injuries, two-tendon repairs, and "early mobilization" regimens. Results were unaffected by age, type of bone fixation, number of arteries repaired, or number of digits injured.
 Douglas C. Ross, MD, FRCS
 Ralph T. Manktelow, MD, FRCS
 Mark T. Wells, MD, FRCS
 et al
- 147 Free Tissue Transfer: An Advanced Strategy for Postinfection Soft-Tissue Defects in the Upper Extremity**
Twenty-four patients with major upper extremity defects from severe necrotizing infections underwent free tissue transfer with a flap survival rate of 95.8% and moderate final impairment of ADL's. Three flaps required vascular salvage, and eight required surgical revision.
 Martin Koschnick, MD
 Simone Bruener, MD
 Guenter Germann, MD, PhD
- 155 Use of the Scrotal Remnant as a Tissue-Expanding Musculocutaneous Flap for Scrotal Reconstruction in Paget's Disease**
Six patients with subtotal scrotoectomy for Paget's disease underwent successful reconstruction by using the scrotal remnant as a stretchable musculocutaneous flap.
 Yong-Chen Por, MBBS, MRCS
 Bien-Keem Tan, MBBS, FRCS
 Soo-Wan Hong, MBBS, FRCS
 et al

- 161 **Clinical, Radiological, and Audiological Relationships in Hemifacial Microsomia**
A study of 70 patients with hemifacial microsomia demonstrated significant correlation between radiographic, audiologic, and clinical findings. However, neither clinical nor temporal bone CT findings were related to type or degree of hearing loss, suggesting that audiology should not be deferred in the face of mild clinical findings.
Jennifer Wan, BA
John G. Meara, MD, DMD
Arzu Kovanlikaya, MD
et al

- 167 **Predicting the Risk of Reoperation in Metopic Synostosis: A Quantitative CT Scan Analysis**
A retrospective CT-scan study of 39 children operated for metopic synostosis demonstrated a strong correlation between preoperative decreased intercanthal distance and the need for subsequent reoperation.
Keith T. Paige, MD
Steven R. Cohen, MD
Catherine Simms, RN
et al

- 173 **A Review of Emergency Department Fluid Resuscitation of Burn Patients Transferred to a Regional, Verified Burn Center**
The status of pre-admission fluid resuscitation was evaluated in forty-one burn patients upon entry into a regional burn center. Thirty per cent of patients were found to have been over-resuscitated; 47% were under-resuscitated, a quarter of them critically so.
Mats Hagstrom, MD
Garrett A. Wirth, MD
Gregory R. D. Evans, MD, FACS
et al

- 177 **Comparison of Venous Drainage in Reverse-Flow Island Flaps: An Experimental Study of the Rabbit Saphenous Fasciocutaneous Flap**
In a rabbit reverse-flow saphenous fasciocutaneous flap model, venous retrograde return was found to be achieved more easily through "direct incompetent valves" than through the "circuitous communicating bypass" route.
Shi-Min Chang, MD
Yu-Dong Gu, MD
Ji-Feng Li, MD

- 182 **Microcirculatory Hemodynamics of the Rat Cremaster Muscle Flap in Reduced Blood Flow States**
In a rat cremaster muscle model, reducing inflow by partial ligature occlusion demonstrated that a 60% reduction in continuous arterial flow was incompatible with flap survival.
Lloyd Varriek Nanhekhan, MD
Mana Siemionow, MD, PhD, DSc

- Case Reports**

- 189 **Suction Lipectomy During Flap Reconstruction Provides Immediate and Safe Debulking of the Skin Island**
Arian Mowlavi, MD
Richard E. Brown, MD

- 194 **Free Perforator Flap for the Treatment of Defects After Resection of Huge Arteriovenous Malformations in the Head and Neck Regions**
Isao Koshima, MD
Yuzaburo Nanba, MD
Tetsuya Tsutsui, MD
et al

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| 200 | Free Gluteal Artery Perforator Flap With a Short, Small Perforator | Isao Koshima, MD
Tetsuya Tsutsui, MD
Yoshio Takahashi, MD
et al |
| 205 | Double V-Y Advancement Flap in the Management of Lower Lip Reconstruction | Antonio Bocchi, MD
Alessio Baccarani, MD
Giovanni Bianco, MD
et al |
| 210 | A Review of Mechanical Adjuncts in Wound Healing: Hydrotherapy, Ultrasound, Negative Pressure Therapy, Hyperbaric Oxygen, and Electrostimulation | Christopher L. Hess, MD
Michael A. Howard, MD
Christopher E. Attinger, MD |
| Editorial | | |
| 219 | The Prince of Pinnae | William D. Morain, MD |
| Letters | | |
| 221 | Supercharged TRAM Flaps Can Be a Worthwhile Procedure! | Syed N. Ali, FRCS(Glasg), FRCSI
Sunil Choudhary, MS, FRCS(Ed) |
| 222 | Reply | H. H. El-Mrakby, MD |
| 222 | Re: Vulvoperineal Reconstruction | Isaac J. Peled, MD |
| 223 | Reply | Paolo Persichetti, MD, PhD |
| 223 | Re: Modification of Split-Thickness Skin Graft | Yener Demirtas, MD
Seyhan Çenetoğlu, MD |
| 223 | Reply | Tiem Chuenkongkaew, MD |
| 224 | Response to Letter by Dr. Yavuzer | M. F. Meek, MD, PhD
J. Henk Coert, MD |
| 224 | Ligated Punctured Expanders: Are They Clinically Safe? | Gürcan Aslan, MD
Ahmet Terzioğlu, MD
Levent Ateş, MD |
| 225 | Upper Lip Orocutaneous Fistula in Edentulous Maxilla | Eustratios Komninakis, MD, PhD
Panagis N. Georgiou, MD |
| 225 | Use of Silicone Block as a Pellet in the Treatment of Minor Malocclusion | Selma Sönmez Ergün, MD |
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Number 3/September 2003

Original Articles

- 229 **Trilucent Breast Implants Five Years' Experience From an Italian Perspective**
Explantation of 29 Trilucent™ breast implants in 23 patients demonstrated a 45% capsular contracture rate at six years follow-up, with five implants having increased substantially in volume. Two patients demonstrated palpable foreign-body granulomatous reactions in the periprosthetic capsules.
 Silvia Cicchetti, MD
 Bruno Spina, MD
 Guido Nicolò, MD
 et al
- 236 **Facial Nerve in Rhytidoplasty: Anatomic Study of Its Trajectory in the Overlying Skin and the Most Common Sites of Injury**
A dissection study of facial nerve branches in 300 fixed cadavers disclosed a trajectory pattern of six diverging lines to fixed reference points. The areas with greatest risk of injury during facial surgery are the temporo-frontal region, the area near the angle of the mandible, and the pre-parotid region.
 Rolando Zani, MD
 Romeu Fadul, Jr, MD
 Marco A. Dias Da Rocha
 et al
- 243 **Ninety Percent Permanent Hair Reduction in Transsexual Patients**
In an epilation study of the Intense Pulsed Light Source (IPLS) on 25 male-to-female transsexual patients, a mean hair clearance rate of 90% was achieved after an average follow-up of 44 months. An average of nine treatments was required, and hair removal was found to be more effective in the absence of prior needle epilation.
 Careen Angela Schroeter, MD
 Jan Stephen Groenewegen
 Thorsten Reineke, MSc
 et al
- 249 **Augmentation Rhinoplasty of the Asian Nose With the "Bird" Silicone Implant**
A bird-shaped, carved silicone implant was used for dorsal and tip augmentation in 1079 Asian rhinoplasties with subsequent infection and displacement rates of 3% each.
 Samuel M. Lam, MD
 Young-Kyoon Kim, MD
- 257 **Obstetric Brachial Plexus Palsy Associated With Breech Delivery**
Of 34 upper extremity obstetrical palsies from breech delivery (32 Erb's and 2 total), 58% underwent full spontaneous recovery, and 21% showed substantial partial recovery. Of the remaining 21% who showed no active elbow flexion by four months of age, the C5/C6 avulsion was treated operatively by an Oberlin's ulnar nerve-to-biceps transfer.
 M. M. Al-Qattan, FRCS
- 265 **Invited Discussion: Obstetric Brachial Plexus Palsy Associated With Breech Delivery**
 Howard M. Clarke, MD, PhD, FRCS(C),
 FAAP, FACS

- 266 Medial Gastrocnemius Muscle Flap in Limb-Sparing Surgery of Malignant Bone Tumors of the Proximal Tibia: Mid-Term Results in 25 Patients** Matthias Buchner, MD
Felix Zeifang, MD
Ludger Bernd, MD
- Twenty-five medial gastrocnemius flaps were used to reconstruct limb-sparing oncologic defects of the proximal tibia. All but one flap survived without complications, although 48% required subsequent revision. Mean postoperative knee ROM was 60°.*
- 273 Indication and Practice of Reverse Flow Extensor Digitorum Brevis Muscle Flap Transfer** Yuichi Hirase, MD
Tadao Kojima, MD
Keizou Fukumoto, MD
et al
- Eight distal dorsal foot defects were successfully reconstructed with reverse-flow extensor digitorum brevis muscle flaps, with only two minor revisions required. Numbness in the first webspace was the sole disadvantage noted.*
- 278 Usefulness of Palatal Mucoperiosteal Grafts for Artificial Eye Socket Contracture** Osamu Ito, MD
Shigehiko Suzuki, MD
Susam Park, MD
et al
- Four contracted eye sockets were treated by contracture release and palatal mucoperiosteal grafting with satisfactory subsequent prosthetic eye use. Donor area healing was complete within three to four weeks.*
- 283 Total Oral Reconstruction for Cancers Associated With Advanced Oral Submucous Fibrosis** Dean Cunha-Gomes, MS, MCh
Naozer M. Kavarana, MS
Charudatta Choudhari, MS
et al
- Twelve patients underwent excision of severe buccal submucous fibrosis with reconstruction by inferiorly based nasolabial flaps to increase interincisal distance. Flap division and inset was performed 21 days later under local anesthesia with 100% flap survival.*
- 290 Dressing for Alveolopalatal Wounds After Alveolar Bone Grafting** Shoji Kondoh, MD
Kiyoshi Matsuo, MD, PhD
Shunsuke Yuzuriha, MD, PhD
et al
- Cotton gauze impregnated with alpha cyanoacrylate was used as an adherent, stenting alveolopalatal wound dressing after alveolar bone grafting in 93 alveolar clefts of 74 patients. Fifteen temporary dehiscences were noted, tiny fistulae developing in four of them.*
- 294 In Vivo Tracking of Rat Preadipocytes After Autologous Transplantation** Bernd Rieck, MD
Sabine Schlaak, MD
- In a rat model, preadipocytes were harvested, marked with a fluorescent marker, and reimplanted autologously. During six months of follow-up, gradual differentiation toward adipocytes was observed.*
- Case Reports**
- 301 Reconstruction of the Middle and Lower Face With Three Simultaneous Free Flaps: Combined Use of Bilateral Fibular Flaps for Maxillomandibular Reconstruction** Mustafa Nişancı, MD
Murat Türegün, MD
Ergin Er, MD
et al

- 308 **Management Strategy for Compartment Syndrome of the Upper Extremity Arising During Anticoagulation or Thrombolytic Therapy: An Increasingly Common Surgical Dilemma** Martin I. Newman, MD
K. Craig Kent, MD
Daniel G. Clair, MD
et al
- 314 **Eyebrow Reconstruction With Intermediate Hair From the Hairline of the Forehead on the Pedicled Temporoparietal Fascial Flap** Hisashi Motomura, MD
Mitinari Muraoka, MD
Kensuke Nose, MD
- 319 **Invited Discussion: Eyebrow Reconstruction With Intermediate Hair From the Hairline of the Forehead on the Pedicled Temporoparietal Fascial Flap** James E. Vogel, MD
- 321 **Reconstruction of an Inner Layer Defect of the Upper Eyelid With Avulsion of the Superior Levator Palpebrae Muscle and Orbital Fat** Hideo Kushima, MD
Shunsuke Yuzuriha, MD
Shoji Kondo, MD
et al
- Review Article**
- 325 **Autonomic Dysreflexia: A Plastic Surgery Primer** Catherine M. Curtin, MD
David R. Gater, MD, PhD
Kevin C. Chung, MD
- Editorial**
- 330 **Plastic Surgery Training—Past, Present and Future** Robert L. Ruberg, MD
- Book Reviews**
- 332 ***Cosmetic Dermatology, Principles & Practice*, by Leslie Baumann, MD** Brentley A. Buchele, MD
- 332 ***Forged by the Knife: The Experiences of Surgical Residency From the Perspective of a Woman of Color*, by Patricia L. Dawson, MD, PhD, FACS** Kerri M. Woodberry, MD
- 333 ***Principles of Nasal Reconstruction*, by Shan R. Baker and Sam Naficy Mosby** Robert J. Havlik, MD
- 333 ***Oral and Maxillofacial Pathology: A Rationale for Diagnosis and Treatment*, by Robert E. Marx, DDS and Diane Stern, DDS** James R. Bruno, DMD, MD
- Letters**
- 334 **Re: Invited Discussion of Silicone Gel Breast Implant Failure: Evaluation of Properties of Shells and Gels for Explanted Prostheses and Meta-analysis of Literature Rupture Data** Eugene P. Goldberg, PhD
Mutaz B. Habal, MD, FRCSC, FACS
James S. Marotta, PhD

- 335 **Reply** Harold J. Brandon, DSc
V. Leroy Young, MD
Clarence J. Wolf, PhD
et al
- 336 **Re: Nodal Metastatic Melanoma in the Neck of a 4-Year-Old Girl After Diagnosis of Spitz Nevus of the Cheek** Brent R. Moody, MD
George J. Hruza, MD
Mark A. Hurt, MD
- 337 **Reply** Nick Reynolds, MB, ChB
- 338 **Announcements**

Number 4/October 2003

Original Articles

- 339 **Causes of Death Among Finnish Women with Cosmetic Breast Implants, 1971–2001** Eero Pukkala, PhD
Ilona Kulmala, MSc
Sirpa-Liisa Hovi, LicNSci
et al
- Cause-specific mortality was examined among 2166 Finnish women undergoing placement of cosmetic breast implants from 1970 through 2000. Overall disease mortality was below expectation, mainly due to lower rates of circulatory system disease. Cancer mortality was close to expectation, but suicide rates were significantly elevated, most prominently in the first five years following surgery.*
- 343 **Invited Discussion: Causes of Death Among Finnish Women With Cosmetic Breast Implants, 1971–2001** David B. Sarwer, PhD
- 345 **An Application of the LeJour Vertical Mammoplasty Pattern for Skin-Sparing Mastectomy: A Preliminary Report** Charles M. Malata, FRCS (Plast)
Elaine L. B. Hodgson, FRCSEd
Joanna Chikwe, MRCS
et al
- Three skin-sparing mastectomies with autogenous or implant reconstruction were performed using the Lejour vertical mammoplasty skin pattern. The technique was found to be especially well suited for axillary dissection and for large or ptotic breasts.*
- 351 **Invited Discussion: An Application of the LeJour Vertical Mammoplasty Pattern for Skin-Sparing Mastectomy** Bryant A. Toth, MD
Hop N. Le, MD
- 353 **Is It Safe to Combine Abdominoplasty With Other Dermolipectomy Procedures to Correct Skin Excess After Weight Loss?** Roger U. Gmür, MD
Andrej Banic, MD, PhD
Dominique Erni, MD
- Seventy-three consecutive abdominoplasties were performed with (n=26) and without (n=47) additional dermolipectomy in remote sites. Although the complication rate was 59% (primarily wound problems), additional dermolipectomies did not increase abdominoplasty-related morbidity but resulted instead in better long-term results.*

- 358 Frequency and Distribution of Talc Contamination in Patients With Silicone Gel-Filled Breast Implants**
Peri-implant scar tissue was found at explantation to contain intracellular talc particles in 146/149 cases implanted before 1984 and only 24/55 implanted after 1983, at which time the largest regional glove manufacturer ceased using talc.
 P. J. Chandler Jr, MD, MBA
 Candace S. Kasper, MD, PhD
- 361 Improving Recipient Vessel Exposure During Microvascular Breast Reconstruction**
A retrospective comparison of 517 free TRAM flaps using Gelpi retractors for axillary exposure versus 699 using the pediatric OMNI retractor demonstrated significant reduction in operative time and decreased incidence of brachial plexus neuropraxia with the OMNI. The improved exposure of the OMNI eliminated the need for excessive arm abduction or other awkward positioning.
 Babak J. Mehrara, MD
 Timothy Santoro, MD
 Andrew Smith, MD
 et al
- 366 The Flashlamp-Pumped Pulsed Dye Laser (585 nm) Treatment of Hypertrophic Scars in Asians**
Nineteen unresponsive hypertrophic scars in 13 Asian patients were treated with a series of pulsed dye laser 585-nm treatments. Three months after completion, clinical improvement was noted in 84%, flattening in 59%, and erythema elimination in 75%.
 Taro Kono, MD
 Ali Riza Erçöçen, MD
 Hiroaki Nakazawa, MD
 et al
- 372 The Soft-Tissue Shaving Procedure for Deformity Management of Chronic Tophaceous Gout**
Seventeen patients with chronic tophaceous gout of the extremities were treated by a powered, subcutaneous shaving system with cannula suction and irrigation. Although two patients required grafting for overlying skin loss, the patients gained symptomatic relief, especially on the feet.
 Su-Shin Lee, MD
 Sin-Daw Lin, MD
 Chung-Sheng Lai, MD
 et al
- 376 Reconstruction of Combined Defects of the Achilles Tendon and the Overlying Soft Tissue With a Fascia Lata Graft and a Free Fasciocutaneous Lateral Arm Flap**
Five patients underwent reconstruction of the Achilles tendon and overlying soft tissue using a doubled fascia lata graft enwrapped with a free neurotized fasciocutaneous lateral arm flap and STSG. All had satisfactory functional outcomes with return of protective sensation, though one patient suffered reflex sympathetic dystrophy of the foot.
 Franz Haas, MD
 Franz J. Seibert, MD
 Horst Koch, MD
 et al
- 383 Regenerative Surgery for Sacral Pressure Ulcers Using Collagen Matrix Substitute Dermis (Artificial Dermis)**
Nine Grade IV sacral pressure ulcers were treated with stapled artificial dermis in meshed or postage-stamp configuration and covered with an alginate gel dressing. Epithelization was complete in 84.1 ± 8.2 days, compared to 215.3 ± 38.4 days in the control group.
 Shigeru Ichioka, MD
 Norihiko Ohura, MD
 Naomi Sekiya, MT
 et al

390 Three-Dimensional Nasal Morphology in Cleft Lip and Palate Operated Adult Patients

Virgilio F. Ferrario, MD
Chiarella Sforza, MD
Claudia Dellavia, DDS
et al

Three-dimensional nasal morphology was determined in 18 operated cleft lip and palate patients and 161 sex and age-matched controls. Nasal width, alar base width, and inferior nostril width were greater and the nasal bridge shorter in CLP patients. Surgical correction failed to provide a normal appearance.

398 Venous 'Supercharging' Augments Survival of the Delayed Rat TRAM Flap

Kazufumi Sano, MD
Geoffrey G. Hallock, MD
David C. Rice, BS

In an inferiorly-based, delayed rat TRAM model, supercharging by retention of the cranial epigastric vein resulted in augmented flap surviving area, suggesting that anastomosing only the vein may be of benefit in the clinical supercharging of the TRAM flap.

403 A Vertical Midline Scar Is a 'High-Risk' Factor for Maximum Survival of the Rat TRAM Flap

Kazufumi Sano, MD
Geoffrey G. Hallock, MD
David C. Rice, BS

In a rat TRAM flap model, a midline ventral incision made one week, two weeks, or 6 months prior to flap elevation resulted in complete contralateral necrosis in every case, suggesting that a prior midline incision does not result in any form of "delay" procedure.

409 Accelerated Diabetic Wound Healing Using Cultured Dermal Fibroblasts Retrovirally Transduced With the Platelet-Derived Growth Factor B Gene

Arnold S. Breitbart, MD, FACS
Jordan Laser, BA
Brian Parrett, BA
et al

Mouse dermal fibroblasts retrovirally transduced with the human PDGF-B gene produced PDGF-B protein and expressed PDGF-B mRNA. When seeded onto scaffold matrices and placed onto full-thickness excised dorsal skin wounds in diabetic mice, accelerated healing was demonstrated compared to controls.

Case Reports

415 Silicone Gel Breast Implant Rupture Presenting as a Fluctuant Back Mass After Latissimus Dorsi Breast Reconstruction

Bret R. Baack, MD, FACS
Jon D. Wagner, DDS, MD

419 Hatchet-Shaped Tensor Fascia Lata Musculocutaneous Flap for the Coverage of Trochanteric Pressure Sores: A New Modification

M. Erol Demirseren, MD
Serdar Gökrem, MD
Orhan Murat Özdemir, MD
et al

423 Two-Stage Reconstruction of Infected Deep Median Sternotomy Wound With an Intercostal Pedicled Oblique Rectus Abdominis Musculocutaneous Flap After Coronary Artery Bypass Grafting

Yasushi Mochizuki, MD
Mutsumi Okazaki, MD
Reiko Kurashina, MD
et al

- 429 **A New Method for Vaginal Reconstruction Using a Pedicled Jejunal Flap** Hung-chi Chen, MD, FACS
Jagdeep S. Chana, MD, FRCS
Guan-ming Feng, MD
- 432 **Editorial**
- 434 **Letters to the Editor**
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Number 5/November 2003

Original Articles

- 439 **Circumferential Mesh in Abdominal Wall Reconstruction: Indications, Technical Notes and Case Report** Beniamino Palmieri, MD
Giorgia Benuzzi, MS
Eleven patients underwent standard abdominoplasty with the addition of the suprafascial application of a circumferential polypropylene mesh. Postoperative lumbar pain was improved in 80% of cases.
- 446 **Quality Analysis of Bilateral Reduction Mammoplasty Using a State-Legislated Comparative Database and an Internal Hospital-Based System** Johnny S. Chung, MD
Robert X. Murphy Jr, MD
James F. Reed III, PhD
et al
A retrospective analysis of 705 patients undergoing reduction mammoplasty demonstrated a progressive reduction in length of stay from 2.0 to 1.1 days over the 8-year study period. Readmission rates were the same regardless of whether length of stay was greater or less than 24 hours.
- 450 **Vascular Compromise of the Pectoralis Major Musculocutaneous Flap in Head and Neck Reconstruction** Dean Cunha-Gomes, MS, MCh
Charu Choudhari, MS, DNB
Naozer M. Kavarana, MS
During intraoperative inspection of 10 pectoralis major musculocutaneous flaps used in head and neck reconstruction, three showed the lateral pectoral nerve coursing inferior to the vascular pedicle, and all three demonstrated obstruction of the vascular pedicle by the nerve. Sectioning of the nerve corrected the problem.
- 455 **Vaginal Reconstruction Using a Modified Rectus Abdominis Musculocutaneous Flap in Pelvic Cancer Surgery** R. Ruiz-de-Erenchun, MD
J. Murillo, MD
A. Bazán, MD, PhD
et al
In nine vaginal reconstructions a new geometric design for the cutaneous paddle of an inferiorly-based rectus abdominis musculocutaneous flap permitted construction of a more anatomic neovagina with a satisfactory neo-introitus. Complications were fewer with the modified design.

- 460 The Medial Circumflex Femoral^{GRACILIS} Local Perforator Flap—A Local Medial Groin Perforator Flap** Geoffrey G. Hallock, MD
- The superomedial thigh skin was found to be transferable as a free flap based solely on the musculocutaneous perforator(s) arising from the gracilis muscle. The flap has the advantages of reliability, concealability of the scar, a consistent vascular pedicle, and no requirement for muscle inclusion.*
- 465 Implantable Baclofen Pump as an Adjuvant in Treatment of Pressure Sores** Sarah A. Mess, MD
Sylvia Kim, BA
Steven Davison, MD
et al
- Baclofen was administered through an intrathecal pump to control severe spasm in three surgical patients with spinal cord injury or multiple sclerosis. Spasm control permitted successful operative management.*
- 468 Oral Burn Contractures in Children** Fuad K. Hashem, MBBS, FRCS(C)
Zikra Al Khayal, BDS, MS
- Three children with severe oral contractures were successfully managed by linear contracture release, skin grafting, and prolonged intra-oral splinting with a fixed mouth-block and commissural splint.*
- 472 Randomized, Double-Blind Trial of Dolasetron Versus Droperidol for Prophylaxis of Postoperative Nausea and Vomiting in Patients Undergoing TRAM Flap Breast Reconstruction Surgery** Peter Loewen, PharmD
Sheila Lamb, MSN
Patricia Clugston, MD
- A prospective, randomized, double-blinded comparison study of intraoperative i.v. droperidol and dolasetron in 71 patients disclosed no significant difference in effectiveness between the two agents in control of nausea or emesis after TRAM-flap breast reconstruction.*
- 478 The Effect of Hyperbaric Oxygen on Ischemia–Reperfusion Injury: An Experimental Study in a Rat Musculocutaneous Flap** Joon Pio Hong, MD, PhD
Hyunja Kwon, MS
Yoon Kyu Chung, MD, PhD
et al
- In a rat TRAM-flap model the addition of 2.5 atmospheres of hyperbaric oxygen either before or after the start of post-ischemia reperfusion resulted in an increased flap survival and a reduction of leukocyte accumulation in the flap. The mechanism of action appeared to be consistent with the down-regulation of ICAM-1 on endothelial cells.*
- 488 Porcine Small Intestinal Submucosa as a Carrier for Skin Flap Prefabrication** Feng Zhang, MD, PhD
Can Zhu, MD
Tanya Oswald, MD
et al
- In a rat model, porcine small intestinal submucosa (SIS) was placed adjacent to a vascular pedicle and elevated as a flap on the pedicle two weeks later. Satisfactory survival, especially after placement adjacent to an a-v fistula, demonstrated that SIS induced angiogenesis in proximity to its placement.*

- 493 **Stabilized Autologous Fibrin-Chondrocyte Constructs for Cartilage Repair in Vivo**
In a rabbit ear model, in vivo injections of fibrin-chondrocyte constructs into auricular cartilage defects resulted in the abundant production of cartilage-like tissue, whereas only minor new cartilage was formed when fibrin alone was injected.
 Martin Fussenegger, MD
 Johann Meinhart, PhD
 Walter Höbling, MD
 et al
- 499 **Tension-Induced Reduction in Connexin 43 Expression in Cranial Sutures Is Linked to Transcriptional Regulation by TBX2**
In a transgenic mouse model, upregulation of TBX2 was seen after the application of stretch to cranial sutures. A corresponding decrease in Cx43 and protein expression support a model of strain-regulated bone formation with feedback inhibition that maintains sutural patency during development.
 James L. Borke, PhD
 Jack C. Yu, MD
 Carlos M. Isles, MD
 et al
- Case Reports**
- 505 **Distally Based Abductor Hallucis Muscle Flap: Anatomic Basis and Clinical Application**
 Anton H. Schwabegger, MD
 Maziar Shafighi, MD
 Christoph Harpf, MD
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- 509 **Bilateral Frontozygomatic Dermoid Cysts**
 Mohammed M. Elahi, MD
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- 513 **Correction of Atrophic Nasal Ala by Sandwiching an Auricular Cartilage Graft Between Para-alar and Nasal Floor Retrogressive Flaps**
 Shigehiko Suzuki, MD
 Gan Muneuchi, MD
 Katsuya Kawai, MD
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- 517 **A Cutaneous Manifestation of Antiphospholipid Antibody Syndrome**
 Lisa M. DiFrancesco, MD
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Original Articles

- 531 Incidence and Severity of Short-Term Complications After Breast Augmentation: Results From a Nationwide Breast Implant Registry**
A review of 1090 Danish women undergoing cosmetic breast implantation over a three-year period disclosed 344 adverse effects among 15% of the patients, including 8% with sensory change (mostly temporary) and 4.1% with capsular contracture. More serious events—including infection, hematoma, seroma, wound separation, skin wrinkling, and pain—each occurred in less than 1%.
Trine F. Henriksen, MD
Lisbet R. Hölmich, MD
Jon P. Fryzek, PhD
et al
- 540 Revision Augmentation Mastopexy: Indications, Operations, and Outcomes**
An eight-year retrospective review of 20 augmentation/mastopexy revisions in the author's practice demonstrated the reason for revision to be capsular contracture (55%), nipple ptosis (55%), implant malposition (35%), size dissatisfaction (30%), unfavorable scar (25%), breast ptosis (20%), nipple malposition (10%), and patient preference (1%). Average duration to revision was seven years, and revisional procedures included repeat mastopexy, capsulectomy, change of implant type, size or location, capsulotomy, capsulorrhaphy, and scar revision.
Scott L. Spear, MD
Mervin Low, MD
Ivica Ducic, MD, PhD
- 547 Areola-Sparing Mastectomy With Immediate Breast Reconstruction**
Seventeen areola-sparing mastectomies with immediate reconstruction were performed on 12 patients for cancer prophylaxis (10), ductal carcinoma in-situ (4), and >2cm peripheral infiltrating carcinoma (3). A single wound infection occurred among otherwise satisfactory aesthetic outcomes.
Rache M. Simmons, MD
Scott T. Hollenbeck, MD
Gregory S. Latrenta, MD
- 552 The Effect of Body Mass Index and Wound Irrigation on Outcome After Bilateral Breast Reduction**
A prospective, randomized study of 30 inferior-pedicle breast reductions demonstrated that body mass index was significantly associated with wound breakdown but that wound irrigation was not.
Alastair J. Platt, FRCS(Plast)
D. Mohan, FRCS
Paul Baguley, FRCS(Plast)
- 556 Modification of the Vertical Rectus Abdominis Musculocutaneous (VRAM) Flap for Functional Reconstruction of Complex Vulvoperineal Defects**
Three radical vulvoperineal ablations were reconstructed with VRAM flaps in which the distal portions were split, thereby making possible the refashioning of the fourchette, vulva, and anoderm lining.
Kenneth Hui, MD
Feng Zhang, MD, PhD
Evan Pickus, MD
et al

- 561 Deep Inferior Epigastric Artery Perforator Flaps in Head and Neck Reconstruction**
Thirteen head and neck reconstructions were performed using DIEAP perforator flaps with a single failure occurring at the time of flap dissection. Advantages included permanent tissue bulk, ability to elevate simultaneously with ablation, and minimal donor site morbidity and visibility.
 Eamon S. Beausang, MD, FRCS (plast)
 Doug McKay, BSc, MD
 Dale H. Brown, MD, FRCSC, FACS
 et al
- 564 Long-Term Results of Replantation for Complete Ring Avulsion Amputations**
Replantation was successful in six of seven ring avulsion injuries where bony amputation was not proximal to the FDS insertion. All arterial and most venous anastomoses were performed with vessel transfers from the middle finger. Total active ROM averaged 200°, and 2PD ranged from 11 to >15 mm.
 Roberto Adani, MD
 Ignazio Marcoccio, MD
 Claudio Castagnetti, MD
 et al
- 569 Invited Discussion: Long-Term Results of Replantation for Complete Ring Avulsion Amputations**
 Kevin C. Chung, MD, MS
- 570 Effect of Steroids on Edema, Ecchymosis, and Intraoperative Bleeding in Rhinoplasty**
A double-blind, randomized study of 60 rhinoplasty patients undergoing hump resection and lateral osteotomy demonstrated decreased early postoperative edema and ecchymosis when preoperative dexamethasone was administered. Continued postoperative dexamethasone resulted in earlier edema resolution.
 Eksal Kargi, MD
 Mübin Hoşnüter, MD
 Orhan Babuççu, MD
 et al
- 575 A Minimalist Approach to the Care of the Indwelling Closed Suction Drain: A Prospective Analysis of Local Wound Complications**
A prospective analysis of 73 patients discharged with 192 closed suction drains in place demonstrated that a program of home showering and simple drain care was well tolerated. Five major complications were associated with panniculectomy wounds or the presence of an implanted foreign body.
 Russell R. Reid, MD, PhD
 Gregory A. Dumanian, MD, FACS
- 579 Medial and Lateral Malleolar Perforator Flaps for Repair of Defects Around the Ankle**
Ten patients with intractable ankle and heel defects were repaired using island medial and lateral malleolar flaps with two distal flap losses and no amputations. Injection cadaver studies demonstrated consistent perforating arteries around the malleoli from all three major leg vessels.
 Isao Koshima, MD
 Seiko Itoh, MD
 Yuzaburo Nanba, MD
 et al
- 584 Eyebrow Transplantation**
Follicular unit transplantation (30 to 110 single-hair micrografts) restored 14 eyebrows satisfactorily in eight patients. The principal advantage of the procedure was the ability to orient individual follicles correctly.
 Selma Sönmez Ergün, MD
 Kayihan Şahinoğlu, MD

- 587 Advantages of the Presence of Living Dermal Fibroblasts Within Restylane for Soft Tissue Augmentation**
In a nude mouse model, subcutaneous injection of cultured human dermal fibroblasts suspended in hyaluronic acid demonstrated immunohistochemical staining for human collagen up to 12 weeks, suggesting a means for achieving better long-term retention of tissue implants.
 Eul-Sik Yoon, MD, PhD
 Seung-Kyu Han, MD, PhD
 Woo-Kyung Kim, MD, PhD
- 593 Human Skin Allograft Used to Treat Open Wounds After Club Foot Release**
Thirteen clubfoot releases were treated with human skin allograft coverage of the open wound and immediate casting. Permanent skin coverage resulted in all cases.
 W. Bradford Rockwell, MD
 Stephen Daane, MD
 Mohammed Zakhireh, MD
 et al
- 598 Acellularization of Human Placenta With Preservation of the Basement Membrane: A Potential Matrix for Tissue Engineering**
Term human placenta was chemically acellularized to produce an extracellular matrix structure with retained basement membrane, a potentially valuable scaffold to support functional cell populations.
 Richard A. Hopper, MD
 K. Woodhouse, PhD
 John L. Semple, MD
- 603 A New Experimental Flap Model: Free Muscle Perforator Flap**
In a rat model, a posterior thigh perforator flap was created based on the distal popliteal vascular pedicle. It was successfully transferred as a free flap in five rats.
 Ömer Özkan, MD
 O. Koray Coskunfirat, MD
 H. Ege Özgentas, MD
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- 607 Two Case Reports of Pollicization of a Previously Syndactylized Index Finger for Congenitally Absent Thumb**
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- 621 Invited Discussion: Sequential Use of a True Perforator Flap and Its Corresponding Muscle Flap**
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- 627 Long-Term Follow-up and Unusual Findings After Microvascular Transfer of Hair-Bearing Skin for Pubic Hair Restoration**
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Review Article

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Emily McLaughlin, MD
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- 636 **Correction of Inverted Nipple: An Alternative Method Using Two Triangular Areolar Dermal Flaps** Dae Young Kim, MD
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- 641 **Double Opposing V-Y Hinge Flap** Tetsuji Yabe, MD
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